



**TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
MEMPHIS ENVIRONMENTAL FIELD OFFICE**

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VIA CERTIFIED MAIL: 91 7108 2133 3932 2044 8312  
RETURN RECEIPT REQUESTED

March 19, 2014

The Honorable Wyatt Bunker  
Mayor, City of Lakeland  
10001 Highway 70  
Lakeland, TN 38002

Re: City of Lakeland, Phase II Municipal Separate Storm Sewer System (MS4) Audit  
National Pollutant Discharge Elimination System Permit Number: TNR077526  
Shelby County

Dear Mayor Bunker:

Over the past 30 years, the Environmental Protection Agency (EPA) and state water quality agencies have realized the great impact that rain water runoff has on surface waters - streams, rivers, lakes, estuary and ocean waters. Rain water falling on industries, urban areas and construction activities can become contaminated with sediments, suspended solids, nutrients phosphorous and nitrogen, metals, pesticides, organic material and floating trash. These pollutants are then carried into the surface waters. Unlike sanitary wastewater and industrial wastewater, most stormwater is not treated prior to entering streams. Therefore, it is imperative that stormwater runoff within urbanized areas be managed so that pollutants are minimized or eliminated from entering surface waters. The Municipal Separate Storm Sewer System (MS4) permit is a type of permit administered by the Tennessee Department of Environment and Conservation (TDEC), Division of Water Resources (DWR) to reduce the amount of pollutants in stormwater runoff.

EPA requires that the Division conduct an audit of the MS4 program. Therefore, on February 4, 5, and 13, 2014, Mr. Lew Hoffman, Mr. Terry Templeton, and Ms. Crystal Warren, with TDEC-DWR, Memphis Environmental Field Office, conducted an audit of the City of Lakeland's MS4 program. This was accomplished by reviewing the stormwater records and ordinances, conducting site inspections of selected municipally owned/operated facilities, and observing City staff as they performed construction inspections. During the audit, Division staff met with Mr.

Philip Stuckert (City Engineer) and Mr. Evan Boulanger (Stormwater Compliance Coordinator). The Division greatly appreciates the time and commitment from your staff during the audit. Their efforts helped expedite the audit process.

Division staff evaluated the City's MS4 stormwater program by reviewing Lakeland's efforts to address the six minimum control measures, as well as monitoring and reporting, required by the permit. This letter contains information regarding the compliance status of Lakeland's MS4 program relative to the requirements set forth in the permit. Recommendations for areas where modifications or improvements to the MS4 program should be considered are listed below. Furthermore, required actions are listed for those areas where the MS4 program does not meet the requirements set forth by the permit.

The City of Lakeland's coverage under the current Phase II MS4 Permit became effective on May 6, 2011. As required by the permit, Lakeland developed a Stormwater Management Plan (SWMP) to address the six minimum control measures listed in the permit, and Lakeland provided a copy of the SWMP to DWR prior to the audit. However, review of the SWMP revealed that although the Plan addresses most of the requirements of the permit, the language and information contained within the Plan is generic and contains little to no Lakeland-specific information.

***Required Action:*** Revise and update the SWMP as needed to address program changes and issues specifically related to Lakeland's MS4 program. Please refer to Section 4.1 of the MS4 permit for additional information.

#### **Minimum Control Measure – Public Education and Outreach (Section 4.2.1):**

According to Lakeland MS4 staff, Lakeland utilizes various methods for educating the public, including the City's website, Tennessee Association of Broadcasters commercials, articles published in *City Watch*, and brochures which are distributed to citizens and displayed in several public locations. Although Lakeland tracks these educational activities in a spreadsheet, key information, such as the date the activity occurred and number of participants, was not documented.

***Recommended Action:*** Track additional key information, including but not limited to, the date activities occur and the number of participants in attendance or materials distributed. Additional information regarding expected water quality improvements should also be recorded.

Lakeland has defined "hot spots" (areas where land use or activities generate highly contaminated runoff, with concentrations of pollutants in excess of those typically found in stormwater) in their ordinances and identified "hot spots" within their jurisdiction. However, these "hot spots" have not been targeted with specific educational or outreach events and/or activities, as required by the permit.

***Required Action:*** Develop and implement educational and/or outreach programs which specifically focus on pollutants of concern from "hot spots." Please refer to Section 4.2.1 of the permit for additional information.



In order to evaluate the effectiveness of Lakeland's Public Information and Education plan (PIE), Lakeland has conducted several stormwater surveys of residents by telephone (the last one in 2011). Although the surveys were said to have provided MS4 staff with some useful information, DWR staff is unaware if any adjustments based on the outcomes of the surveys were made to the PIE. Therefore, other methods of evaluating the effectiveness of the plan, such as surveys or questionnaires addressed to the specific groups listed in the MS4 permit, may provide more beneficial information to the MS4 staff.

*Recommended Action:* Conduct an appropriate activity to evaluate the effectiveness of the PIE, and based on the results of the activity, modify the PIE as necessary

Lakeland's Public Information and Education plan addresses most of the required target groups, with the exception of chemical application of pesticides, herbicides and fertilizers by the general public and professional chemical applicators. The permit requires that the general public and professional applicators be made aware of the proper storage, use, and disposal of pesticide, herbicide, and fertilizer use.

*Required Action:* Modify and update the PIE to include educational campaigns targeted to the general public and professional chemical applicators on the proper storage, use, and disposal of pesticides and herbicides, and fertilizer use. Please refer to Section 4.2.1.d of the MS4 permit for additional information.

#### **Minimum Control Measure – Public Involvement and Participation (4.2.2)**

The method of advertising Lakeland's public involvement opportunities was required to be implemented by 6/6/2011. Lakeland staff stated that Lakeland is complying with the public notice requirements of the permit by advertising in the *Commercial Appeal*, the City's website, and Facebook; however, documentation of the *Commercial Appeal*, website, and Facebook advertisements was not available for review.

*Recommended Action:* Keep hard copies of the newspaper articles and printouts from media sources on file for documentation, and utilize an effective tracking system to manage public involvement and participation activities.

Lakeland has a thorough and helpful stormwater web page, which educates citizens on the importance of stormwater and identifies pollutants that contribute to the impairment of streams; however, the web page does not identify Lakeland's stormwater staff.

*Recommended Action:* Modify the web page so that the contact information for the appropriate stormwater staff is more prominently displayed on the stormwater web page.

Lakeland staff stated that Lakeland sponsors several stormwater related volunteer activities with the goal of improving stormwater quality while also educating the public, including HOA clean-ups, a biannual community clean-up program where citizens can properly dispose of household wastes, such as bulky trash, yard waste, e-wastes, tires, and white goods, and roadside litter clean-up programs.



*Recommended Action:* Continue these activities, but also look for additional activities by which citizens, HOAs, scouts, or other groups can provide assistance to Lakeland to continue improving stormwater quality. Utilize a more detailed tracking system for documenting key information pertaining to each event and to document related or expected water quality improvements.

#### **Minimum Control Measure – Illicit Discharge Detection and Elimination (4.2.3)**

The Illicit Discharge Detection and Elimination (IDDE) program and Enforcement Response Plan (ERP) were to have been implemented by 11/6/12. According to documents provided during the audit, the IDDE Ordinance was codified on December 31, 2012. Lakeland utilizes a detailed and progressive Geographic Information System (GIS), which includes location, size, and direction of flow for each outfall in the stormwater drainage system. During the audit, Lakeland staff stated that they are also planning to add photographs of the outfalls to the GIS.

*Recommended Action:* Link enforcement information to the GIS to use as a possible method of tracking enforcement actions taken and documenting results.

Although Lakeland has an Enforcement Response Plan, the plan primarily addresses construction-related issues. The MS4 permit requires additional information, such as enforcement escalation procedures, IDDE procedures, complaint investigation deadlines, and noncompliance with post-construction requirements, etc., to be included in the ERP.

*Required Action:* Modify and enhance the ERP to address all of the requirements listed in the permit, and be more comprehensive in scope. Please refer to Sections 4.2.3 and 4.5 of the MS4 permit for additional information.

Lakeland has defined “hot spots” and prohibited contamination of storm water runoff from “hot spots” in the ordinances. Although the ordinances do not specifically allow for maximum penalties per day for each day of violation, the Enforcement Response Plan, which references the ordinances, does.

*Required Action:* Revise the ERP to address all types of illicit discharges, and modify the ERP to more clearly reference the connection between the ordinances and the ERP. Please refer to Sections 4.2.3 and 4.5 of the MS4 permit for additional information.

In order to report an illicit discharge, a citizen has to call the Lakeland City Hall front desk to report the issue. Lakeland does not have a direct method, such as a hotline or website, for allowing citizens to report illegal spillage, dumping, or other illicit disposal of materials into the MS4 system.

*Recommended Action:* Implement additional measures that will allow the public to directly report illicit discharges, such as adding a stormwater hotline or enhancing the City’s website to allow citizens an additional mechanism for reporting stormwater issues to City staff.



Written guidelines and procedures for responders to follow in case of a hazardous waste or material spill were not available for review during the audit.

**Required Action:** Develop guidelines and procedures to make available to all appropriate municipal staff who would respond to a hazardous waste or material spill. Please refer to Section 4.2.3 for additional information.

Lakeland's Enforcement Response Plan satisfies the MS4 permit requirements regarding the types of enforcement actions allowed by the City's ordinances. However, an effective, comprehensive tracking system for enforcement actions is not utilized by the City. Instead, the paper files are stored separately, which prevents staff from being able to track and analyze enforcement actions.

**Recommended Action:** Develop a more detailed tracking system for documenting key information pertaining to each violation and to allow for easier summarization of activities by location, time period, etc.

Although Lakeland provides annual training to municipal staff regarding various topics, Lakeland currently does not provide training regarding the hazards associated with illegal discharges and improper disposal of waste.

**Required Action:** Add training specifically addressing the hazards associated with illegal discharges and improper disposal of waste to the annual training agenda or to some other municipal staff training session. Please refer to Section 4.2.3 of the MS4 permit for additional information.

#### **Minimum Control Measure – Construction Site Stormwater Runoff Control (Section 4.2.4):**

This program element should have been implemented by May 6, 2013. Updated requirements corresponding to the Tennessee Construction General Permit (CGP) were due by November 6, 2012. Updated ordinances were passed (final reading) on December 31, 2012.

The construction stormwater program in Lakeland generally meets the requirements of the permit and is one of the most staff intensive aspects of the City's stormwater program. Internal communication procedures regarding the review of submitted plans, issuance of building permits and codes violations within Lakeland's jurisdiction should be reviewed and enhanced where necessary. These procedures should include, at a minimum, plans review, inspection protocols and documentation issues.

**Required Action:** Modify the SWMP as needed to provide staff with written procedures that address:

- all requirements of the current Construction General Permit concerning special conditions for impaired and exceptional waters;
- procedures for site plan review which incorporate consideration of potential water quality impacts;



- procedures addressing evaluation of submitted plans' completeness and overall BMP effectiveness, as well as for all other aspects of the City's construction stormwater program.

The MS4 program has relied primarily on verbal warnings, Notices of Violation (NOVs) and Stop Work Orders in its efforts to regulate sediment-laden stormwater discharges from construction sites. However, Lakeland staff stated that Stop Work Orders were not effective and are often ignored and that Lakeland was not utilizing civil or administrative fines/penalties (which are in the ordinances) to bring violators into compliance. Effective enforcement is necessary to assure stormwater runoff is free of illicit waste, sediment from construction site erosion, etc.

*Recommended Action:* Utilize all available enforcement measures to address sediment-laden stormwater contamination within Lakeland's jurisdiction. Modify the ERP to include enforcement steps involving construction activity that will be available to the City's stormwater staff. Track information such as construction plans reviewed and enforcement actions utilized by the City in an electronic tracking system or database.

The new Land Development Regulations are detailed and appear to address considerations of potential water quality impacts during the plans review process.

*Recommended Action:* Incorporate the new Land Development Regulations by reference into the SWMP.

Evan Boulanger (Stormwater Compliance Specialist) and Matt Brown (City Inspector) have obtained certification under the Fundamentals of Erosion Prevention and Sediment Control Level I course, and Evan has also obtained certification under the Level II Design Principles for Erosion Prevention and Sediment Control for Construction Sites course. However, the MS4 permit requires plans reviewers to have obtained certification under the Level II course. It was explained that at this time the primary plans reviewer is Philip Stuckert. Philip is currently not certified under Level II.

*Required Action:* All plan reviewers must receive a certificate of completion from the Level II Design Principles for Erosion Prevention and Sediment Control for Construction Sites course. Please refer to Section 4.2.4 of the MS4 permit for additional information.

DWR observed Evan Boulanger perform two of his routine construction compliance evaluation inspections. Overall, Evan exhibited an understanding of the intent and purpose of the inspections and his role related to water quality. However, the inspection form used was associated with a previous version of the TN Construction General Permit. Also, since no large construction projects have occurred during Evan's tenure with the City, he has limited experience performing construction inspections. Please be aware that Evan is welcome to join DWR staff on inspections outside of Lakeland's jurisdictional area to gain additional experience and training.

*Recommended Action:* Lakeland's stormwater staff should continue to increase their knowledge about the CGP and the Tennessee Erosion and Sediment Control Handbook,



and be aware of any updates in both documents. They should expand their knowledge of the construction program by attending appropriate training, webinars and conferences, if possible.

**Minimum Control Measure - Permanent Stormwater Management in New Development and Redevelopment (Section 4.2.5):**

This Minimum Control Measure has not been fully implemented, and the ordinance changes have not yet occurred. For Lakeland, this requirement is not due until May 6, 2015. The recently adopted Land Development Regulations generically address the idea behind the water quality improvement aspect of this requirement but do not specifically address all the upcoming requirements in the permit. Please understand that permanent stormwater management can be complex and will likely require additional training of stormwater staff. Also, please be aware that this Minimum Control Measure encompasses a significant portion of the permit and should be fully understood.

***Required Action:*** Modify the ordinances appropriately to address this program element requirement by the deadline indicated in the permit. Please refer to Section 4.2.5 of the MS4 permit for more information.

***Required Action:*** Modify the ERP to include project review, approval, and enforcement procedures as related to this Minimum Control Measure.

Lakeland has not yet developed or implemented a system to track post construction BMPs. Information to be tracked includes: project name, location, owner, start/end dates, BMP description, latitude/longitude coordinates, maintenance requirements and inspection information. This requirement was due November 6, 2011. However, due to the fact that ordinance changes have not yet occurred, a tracking system is not critical until the ordinances support this requirement of the permit.

***Recommended Action:*** Implement a tracking system in advance of the ordinance changes so that the tracking system can be utilized immediately.

Lakeland's ordinances require that the streamside buffer be a minimum of 75 feet. This buffer exceeds the minimum distances set forth by the MS4 permit. DWR appreciates Lakeland's additional footage to the streamside buffer since increased undisturbed vegetation may provide further protection and water quality improvements to the receiving stream.

**Minimum Control Measure – Pollution Prevention/Good Housekeeping for Municipal Operations (Section 4.2.6):**

Lakeland's municipally operated facilities that were visited during the audit were generally well maintained. Personnel at these facilities appear to be aware of good housekeeping practices. Chemicals and waste materials at these facilities were properly stored to avoid contact with stormwater. However, at the wastewater treatment plant leaf compost area, water containing tannic acid and other components resulting from the breakdown of vegetative material was



observed in pools near the piles. Please be aware that a berm or other means to prevent this runoff from discharging offsite and into waters of the state should be implemented.

Lakeland staff informed DWR that a Health and Safety Manual is available for staff at each municipally-operated building. DWR were unable to review the Manual and therefore unable to determine if the guidance for stormwater Best Management Practices (BMPs) and/or spill control procedures complies with the permit.

***Required Action:*** Train municipal staff on the reduction of pollutants in storm water runoff on a regular basis and document the training. Please refer to Section 4.2.6 of the MS4 permit for additional information.

***Recommended Action:*** Review the Manual to ensure that the Manual provides information regarding stormwater Best Management Practices (BMPs) and/or spill control procedures.

Lakeland MS4 staff informed DWR that the storm drain system is inspected seasonally and leaves are removed from the system by use of the City's vacuum trucks. However, the procedures utilized for collection and disposal of waste collected from the storm drain system have not been formalized in writing.

***Recommended Action:*** Modify the SWMP to include the procedures regarding the collection and disposal of waste.

According to Lakeland staff, there has been no recent flood management projects related to water quality within the City limits. However, procedures on how to assess the impacts of any such future projects on water quality have not been formalized in the SWMP.

***Recommended Action:*** Modify the SWMP to include procedures on ways to ensure that new flood management projects assess the impacts on water quality. If possible, examine existing projects for incorporating additional water quality protection devices or practices.

#### **Enforcement Response Plan (Section 4.5):**

As mentioned previously in sections (Minimum Control Measure – Illicit Discharge Detection and Elimination and Minimum Control Measure – Construction Site Stormwater Runoff Control), Lakeland has an Enforcement Response Plan, although the Plan predominately addresses construction-related issues. Because an elementary tracking system is used, an efficient method for tracking chronic violators is not available. Although Lakeland has informal knowledge of chronic violators, a plan to identify chronic violators should be formalized in writing. Also, Lakeland staff has been unable to issue civil or administrative fines/penalties as methods of enforcement against violators.

***Required Action:*** Revise the ERP to address all illicit discharges, not just illicit discharge related to construction activities. Please refer to Section 4.5 of the MS4 permit for additional information.



**Required Action:** Develop a formalized plan for tracking chronic violators to reduce the rate of noncompliance recidivism from chronic violators. Please refer to Section 4.5.4 of the MS4 permit for additional information.

**Recommended Action:** Utilize all available enforcement measures to address sediment-laden stormwater contamination within the jurisdiction.

**Recommended Action:** Utilize a more detailed tracking system for documenting key information pertaining to each violation and to allow for easier summarization of enforcement activities by location, time period, etc.

## **Monitoring, Recordkeeping and Reporting (Section 5):**

### **Analytical Monitoring (5.1)**

Due to Lakeland's initiative and cooperation with the Division, required analytical monitoring has been completed.

### **Non-analytical Monitoring (5.2)**

During the audit, Lakeland provided DWR with the Visual Stream Assessment documenting the condition of streams in the immediate vicinity of all known stormwater outfall pipes/structures. DWR will review this document and provide comments at a later date.

Lakeland staff stated that field screenings of 20% of the stormwater system and inlets in Lakeland are performed each year, so that the entire system is evaluated every five years. However, with the exception of the recently conducted VSAs, outfalls are not included in the inspection process.

**Recommended Action:** Expand Lakeland's field screening program to include all types of stormwater outfalls into waters of the state in order to comprehensively identify potential sources of illicit discharge.

Gray's Creek, which is located in a portion of Lakeland's jurisdiction, has an approved TMDL (Total Maximum Daily Allowance) for E. coli. In order to achieve wasteload allocations prescribed by the TMDL, Lakeland educates the public about pet waste in the local parks with educational signage and by providing pet waste bags and proper disposal containers.

### **Reporting (5.4)**

Although Lakeland's Annual Stormwater Report was made public electronically, the report was not presented in a public hearing for suggestions and comments prior to submitting the report to the Division as required by the permit.



**Required Action:** Present each annual report at a public hearing for suggestions and comments prior to submitting the report to the Division by September 30<sup>th</sup> of each year. The public hearings should be properly advertised and documented.

### **Summary**

One of the Division's missions is protection of waters of the state, so we appreciate your prompt attention and cooperation regarding the items in this audit report. And we would like to reiterate that we greatly appreciate the time and commitment from your staff during the audit. The documentation and assistance provided enabled our Division staff to conduct and complete the audit in a timely and thorough manner.

We want to specifically mention Lakeland's GIS system. It is one of the more advanced systems among the local MS4s that we have observed thus far. We encourage you to expand and enhance Lakeland's GIS system to more fully incorporate the many storm water activities that you are already performing and those that you will undertake in the future. We also believe that your GIS system could be the key to enhancing the tracking requirements that are specified throughout the permit.

During the audit, Division staff found several areas where modification or improvement to Lakeland's MS4 program should be considered. For example, DWR strongly recommends that an upgraded tracking system be implemented to improve tracking and organization of all elements of the MS4 program. Although Lakeland does meet the permit requirements for documenting activities, Lakeland staff was unable to effectively provide relevant documentation to verify activities and programs hosted by the City or effectively track important information such as enforcement actions. Division staff also noted a few items where some modifications or additional actions are required, such as the implementation of the permanent stormwater management element. However, Division staff was impressed with the enthusiasm and cooperation of Lakeland's MS4 staff and felt they are trying to fulfill Lakeland's MS4 responsibilities in a professional and competent manner. The Division encourages the MS4 staff and any other interested Lakeland staff or elected officials to contact us at any time with questions or comments. The Division also wants to remind you that the MS4 permit renewal and public comment process occurs every five years and encourage you to participate. The next permit is scheduled to be re-issued in 2015 and notification of the public comment period will be provided to the MS4s and public prior to re-issuance.

**Required Action:** Please provide a written response to the Division by April 25, 2014, that discusses how the requirements that have been noted will be addressed and your proposed timeline for those items to be addressed. Also include information about the division's recommended actions and how those which will be implemented will be accomplished.

If you have any questions or concerns with regard to the MS4 permit or this audit report, please



contact Crystal Warren at 901-371-3164 or via email at [Crystal.Warren@tn.gov](mailto:Crystal.Warren@tn.gov), or Terry Templeton at 901-371-3018 or via email at [Terry.Templeton@tn.gov](mailto:Terry.Templeton@tn.gov).

Sincerely,



Joellyn Brazile, CPESC  
Environmental Program Manager

Enclosure: EPA Water Compliance Inspection Report (Form 3560)

cc: TDEC/DWR/MEFO – file  
TDEC/DWR/NCO – Enforcement & Compliance Section

ec: Mr. Chris Thomas, City Manager  
Mr. Philip Stuckert, City Engineer  
Mr. Evan Boulanger, Stormwater Compliance Specialist